



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
Fax 613 632-5246

D5810-5

Job Sheet 207553



POSITIVE RECALL

EFFECTIVE 3/13/20 AUTH: *MBL*

RELEASED \_\_\_\_\_ DATE \_\_\_\_\_

Part No: D5810-5

Job Qty: 2 pcs

Part Name: Hinge Support



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/27/20

Job Tracking No:

Due Date: 4/27/20

Created By: Jennifer Renwick

Type: Stock

Description:

Note: URF 20-522 DWG D5810 Rev A IPP Rev. A 2020.01.30 New issue DP Verify DD

Ship Via:

## Bill of Materials

## Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup	Run	Workcenter / Supplier	Lead Time	
110	Large Fab - Welded Assy-1	2 pcs	4/27/20	4/27/20	0.00	0.20	Large Fab - 1		
							Large Fab - 10		
							Large Fab - 2		
							Large Fab - 3		
							Large Fab - 4		
							Large Fab - 5		
							Large Fab - 6		
							Large Fab - 7		
							Large Fab - 8		
							Large Fab - 9		
							Large Fab - 11 (Various)		
							Large Fab - 12		<i>MBL</i>
120	QC 5	2 pcs	4/27/20	4/27/20	0.00	0.00	QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		
							QC 5 - 58		
							QC 5 - 68		
							QC 5 - 9		
							QC 5 - 50		
							QC 5 - 30		
							QC 5 - 40		
							QC 5 - 61		
							QC 5 - 81		



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
CANADA  
TEL.: 1 613 632-5200  
Email: sales@dartaero.com  
www.dartaerospace.com

Container No: S263857



Part: D5810-5

Job No: 207553

Serial No/Batch: S263857

Revision: A

Inspector:

Exp Date:

Instructions:

Date: 03/16/20

DAS  
MAR 17 2020 40  
9-89

Plex 3/12/20 8:05 AM Dart.Lajeunesse.marie

130 Packaging 3-1 - Stock - B4B 2 pcs	4/27/20	0.00 0.00	Packaging 3 - 1 - B4B	
			Packaging 3 - 2 - B4B	
			Packaging 3 - 3 - B4B	
			Packaging 3 - 4 - B4B	
			Packaging 3 - 5 - B4B	
			Packaging 3 - 6 - B4B	
			Packaging 3 - 7 - B4B	
			Packaging 3 - 8 - B4B	
			Packaging 3 - 9 - B4B	
			Packaging 3 - 10 - B4B	
			Packaging 3 - 11 - B4B	WAL
			Packaging 3 - 12 - B4B	
			Packaging 3 - 13 - B4B	
			Packaging 3 - 14 - B4B	
			Packaging 3 - 15 - B4B	
			Packaging 3 - 16 - B4B	
			Packaging 3 - 17 - B4B	
			Packaging 3 - 18 - B4B	
			Packaging 3 - 19 - B4B	
			Packaging 3 - 20 - B4B	
			Packaging 3 - 21 - B4B	
			Packaging 3 - 22 - B4B	
			Packaging 3 - 23 - B4B	
			Packaging 3 - 24 - B4B	
			Packaging 3 - 25 - B4B	
			Packaging 3 - 26 - B4B	
			Packaging 3 - 27 - B4B	
			Packaging 3 - 28 - B4B	
			Packaging 3 - 29 - B4B	
			Packaging 3 - 30 - B4B	
			Packaging 3 - 31 - B4B	
			Packaging 3 - 32 - B4B	
			Packaging 3 - 33 - B4B	
			Packaging 3 - 34 - B4B	
			Packaging 3 - 35 - B4B	
			Packaging 3 - 36 - B4B	
			Packaging 3 - 37 - B4B	
140 QC 21 - SA 2 pcs	4/27/20	0.00 0.00	QC 21 - SA - 21	MAR 18 2020
			QC 21 - SA - 70	
			QC 21 - SA - 53	

Part Op 110 - Fabricate per Drwg - 1-Cut as per DWG. 2-Deburr.  
 Descriptions: 120 - QC5- Inspect part completeness to step on W/O  
 130 - Identify as per dwg & Stock Location: *WAL*  
 140 - QC21- Final Inspection - Work Order Release

## Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M4130NTS0.750W.035	4130 Square Tube 0.750 X 0.035W	16 ft (8 ea)	110-Large Fab - Welded Assy-1	5 250794

## Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-Large Fab - Welded Assy-1	M4130NTS0.750W.035	16	324	0

## Part Specifications

Specifications could not be found.



8

7

6

5

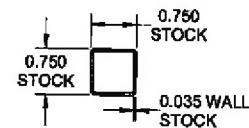
4

3

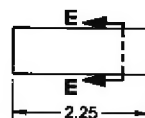
2

45°  
2 PL

97.00

**D5810-3 LONG RIM****SECTION E-E**

95.50

**D5810-5 HINGE SUPPORT****D5810-7 HINGE RIB**

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 207553 ML  
2003-12

UNDER REVIEW

URF 2020-522 20.02.14 (NO)

**NOTES:**

- 1) MATERIAL: AISI 4130N STEEL SQUARE TUBING, 3/4 X 0.035 WALL  
PER MIL-T-8736 OR AMS 6371/6360/6361/6362/6373/6374  
REF DART SPEC M4130N-TS0.750W.035
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: -3: 2.64 lbs  
-5: 2.62 lbs  
-7: 0.06 lbs

**RELEASED**2020 FEB 18 *NO*

APPROVED

DESIGN  
DRAWN  
CHECKED  
MFG. APPR.  
APPROVED  
DE APPR.  
DATE

ZF  
ZF  
KPT  
DD  
NO  
CP

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.

**D5810**

TITLE

**XL BASKET BODY**

20.01.20

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REV. A

SHEET 4 OF 7

SCALE

NTS

# INSPECTION SHEET

**DAS 40**

9-89Date:Revised by



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# **PURCHASE ORDER** **POHB045594**



**Supplier:** FAC001-VU  
Factory Steel  
14020 Oakland Ave.  
Detroit, MI 48203 USA  
Phone: 313 883 6300  
Fax: 313 883 4883

**PO No:** POHB045594

**PO Date:** 1/16/20

**Due Date:** 2/4/20

**Purchase Order  
Revision:**

JAN 16 2020

**Revision Date:**

**Ship-To Contact:** Phone:

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

**Via:** Ground

**Pynt Terms:** Net 30

**Freight Terms:**

**Special Comments:**

Items													
Line Item	Job	Part	Drawing	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1		M4130NTS0.750W.035			4130 Square Tube 0.750 X 0.035W : MATERIAL: AISI 4130N STEEL SQUARE TUBING PER ONE OF THE FOLLOWING SPEC'S: MIL-T-6736, AMS 6371, 6390, 6361, 6362, 6373 OR 6374	Firmed	-	2/4/20	600 ft	0 ft	600 ft	\$7.25/ft	\$4,350.00
2		M4130NTS1.000W.065			4130 Square Tube 1.000" X 1.000" X 0.065"W : MATERIAL: AISI 4130N STEEL SQUARE TUBING PER ONE OF THE FOLLOWING SPEC'S: MIL-T-6736, AMS 6371, 6390, 6361, 6362, 6373 OR 6374	Firmed	-	2/4/20	160 ft	0 ft	160 ft	\$11.70/ft	\$1,872.00
Grand Total:												\$6,222.00	

# PACKING LIST

No. 67371

PG 1 OF 1

<b>FACTORY STEEL &amp; METAL SUPPLY</b> 14020 OAKLAND AVENUE DETROIT, MI 48203  (313)883-6300 PHONE (313)883-4883 FAX		<del>CUSTOMER PO</del> <b>POHB045594</b>		<b>BUYER</b> CHANTEL LAVOIE Tel (613) 632-3336 Fax (613) 632-4443		<b>SHIP DATE</b> 01/21/2020	
		CUSTOMER JOB		<b>SALES ORDER</b> 60306		<b>ORDER DATE</b> 01/16/2020	
<b>SOLD TO</b> DART AEROSPACE 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7		<b>SHIP TO</b> DART AEROSPACE 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7		<b>SALES REP</b> MICK HALON		<b>RESALE #</b> 59-2958719	
				<b>SHIP INST</b> CALL WHEN READY		<b>CARRIER</b> TRUCK	
				<b>PRO#</b>		<b>BLIND Y/N</b> N	
				<b>TERMS</b> NET 30 DAYS		<b>FOB</b> DETROIT	
LINE	QUANTITY	DESCRIPTION		WIDTH	LENGTH	WEIGHT	
1	609.917 FT	4130N CD SMLSS SQ TUBE 3/4" X .035W  Tag Mill Ref # Heat 153513 023679 616506		Pcs Length 26 20' / 24' RL	20' / 24' RL	207.554	
2	171.333 FT	4130N CD SMLSS SQ TUBE 1" X .065W  Tag Mill Ref # Heat 153514 072143 072067869		Pcs Length 7 22' / 23' RL	22' / 23' RL	141.606	
3	1 PCS	PACKING CHARGES  MTRS (CIRCLE) FAX SHIPMENT INVOICE ALL  DATE: _____ INITIAL: _____					
TOTAL WT							
349 LBS							
RECEIVED BY - SIGNATURE		RECEIVED BY - PRINTED NAME			DATE RECEIVED		

LIWEI

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M4130NTS 0.750W 035 PO / BATCH NO.: POMB045594  
 DATE: JAN 27 2020 5250794

MATERIAL CERT REC'D: YES  
 QUANTITY RECEIVED: 609 PK  
 QUANTITY INSPECTED: 609 PK  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .750W.035  
 THICKNESS RECEIVED: .750W.035  
 SHEET SIZE ORDERED: —  
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/> N	
CORROSION	Y <input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> N	MIL-T-6736
CORRECT THICKNESS	<input checked="" type="checkbox"/> N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> N	616506
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

*testers located in the Quality Office*

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: _____	JAS	SIGNED OFF BY: _____	
DATE: <u>JAN 27 2020</u>	32 9-89	DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

LIVE 1  
M4130NTS 0.750W.035

S250794

616506



DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED PH	APPROVED PH	DRAWING NO. M4130N-TS	REV. A SHEET 1 OF 1
DATE 05.02.09		TITLE 4130N SQUARE TUBING	SCALE NTS
A	05.02.09	NEW ISSUE	

PURCHASE MATERIAL:

AISI4130N STEEL SQUARE TUBING PER ONE OF  
THE FOLLOWING SPEC'S: MIL-T-6736, AMS 6371,  
6360, 6361, 6362, 6373 OR 6374

DAS  
82  
9-89

PART NUMBER: M4130N-TS | A.AAA | W | .TTT |

WHERE A.AAA = WIDTH IN INCHES  
TTT = WALL THICKNESS IN INCHES

EXAMPLE: 0.50" X 0.035" WALL = M4130N-TS0.500W.035

RELEASED  
05.02.09

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1



**PLYMOUTH TUBE CO.**

1209 Ecol 12th Street, Detroit, MI 48203  
Phone: (313) 673-1515 Fax: (313) 673-7345

TRUST YOUR SOURCE / ACCEPT NO SUBSTITUTION



## PRODUCT CERTIFICATION

SALES ORDER - LINE / RLS

175629 - 1 / 0

SHIP TO

Factory Steel & Metal Supply C  
14020 Oakland Avenue  
Detroit, MI 48203  
USA

WORK ORDER 023679

PCS/HEAT 0

HEAT NUMBER 616506

MELT SOURCE Beneteler Steel & Tube-Germany

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LADING NO	CERT ID / REV	CERT DATE								
3887	SQ-N34035			/									
<b>PART DESCRIPTION</b> SHSQ0750035J300 ***** Square OD ***** Side1: 0.7500 Max:0.7600 Min:0.7400 Side2: 0.7500 Max:0.7600 Min:0.7400 Wall: 0.0350 Max:0.0380 Min:0.0320 Length: 10.00/25.00 Spec: MIL-T 6736B Seamless Aircraft Grade: 4130 Anneal: Cond N													
<b>CERTIFICATION REQUIREMENTS</b> FAR BAA (FAR 52.225-1 Buy America Act Supplies), DFARS 252.225-7001 By America Act & Bal. of Payments Program FAR TAA (FAR 52.225-5 Trade Agreements)(Paragraph 1,3,4,5)This material was fully furnished and conforms to the requirements of ASTM A-450. The Grain size is determined and reported by the raw material supplier in accordance to ASTM E-112. This raw material was magnetic particle inspected by the raw material supplier in accordance to AMS 2640J and/or ASTM E-1444, and rated as Frequency, and Severity to AMS 2301, latest revision. Yield is determined by using the 0.2% offset method. Additional Specifications - AMS-T 6736B, 6360P & 6371L. Material produced in accordance to ASTM A-519-17 and MIL-T 6736B. This material meets Plymouth ProMoly specifications. Jominy results: J(5/16")=45 J(8/16")=38													
<b>Chemical Analysis</b>													
C	Mn	P	S	Si	Al	Cr	Mo	Ni	Pb	Cu	V	Ti	Sn
.310	.55	.011	.002	.230	.036	.87	.18	.12	.001	.16	.002	.002	.010
<b>Physical Properties</b>													
Frag.	Severity	Grain Size											
.020	.015	9											
<b>Mechanical Properties</b>													
<b>TEST</b>	<b>UNITS</b>	<b>#TESTS</b>	<b>HIGH</b>	<b>LOW</b>	<b>AVERAGE</b>	<b>STD-DEV</b>							
Tensile	Psi	6	126660	125480	126065	482							
Yield	Psi	6	120930	119880	120387	374							
Elongation	%	6	21	20	20	1							
Rockwell C	Rc	6	25	25	25	0							
<b>TEST</b>	<b>RESULT</b>												
Decarb/OD	Pass												
Total ID/OD decarb	Pass												

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Streater in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

*James D. Crosswell*  
Quality Assurance

①



**PLYMOUTH TUBE CO.**

1205 East 12th Street, Stretor, MI 48203  
Phone: (313) 472-1616 Fax: (313) 472-0342

TRUST YOUR SOURCE. ACCEPT NO SUBSTITUTIONS.

**PRODUCT CERTIFICATION**

SALES ORDER - LINE / RLS

175629 - 1 / 0

WORK ORDER 023678

PCS/HEAT 0

HEAT NUMBER 616506

MELT SOURCE Benteler Steel & Tube-Germany

SHIP TO

Factory Steel & Metal Supply C  
14020 Oakland Avenue  
Detroit, MI 48203  
USA

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LADING NO	CERT ID / REV	CERT DATE
3867	SQ-N34035			/	

PART DESCRIPTION SHSQ0750035J300

**Additional Specification(s)**

TEST	UNITS	#TESTS	HIGH	LOW	AVERAGE	STD-DEV
Brinell	Brinell	5	253	253	253	0

This test report data is for the heat Chemistry Stated above.

The material in this test report is:

- 1) Drawn in the USA
- 2) Free from Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE), and Mercury contamination.
- 3) NAFTA compliant.

End of Certification

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Stretor in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

*Janina Bussanoff*  
Quality Assurance

Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

Job: _____  Part No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/>	<b>DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Water Jet <input type="checkbox"/>            Supplier <input type="checkbox"/>            Quality <input type="checkbox"/> </div> </div>			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
<b>Description Work Order Deviation</b>		<b>Disposition</b>		<b>Completed By</b>	
				<b>Lead hand / Supervisor</b>	
				<b>QC / QA Coordinator</b>	
<b>Root Cause</b>  <div style="display: flex; flex-direction: column; align-items: flex-start;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Presservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div>		<b>FAULT CATEGORY</b>  <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Pressure/Forced  <input type="checkbox"/> Bending  <input type="checkbox"/> Crushing  <input type="checkbox"/> Cracks  <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist  <input type="checkbox"/> Marks/Chatter  <input type="checkbox"/> Mislabeled         </div> <div style="width: 50%;"> <input type="checkbox"/> Contamination  <input type="checkbox"/> Misaligned/off center  <input type="checkbox"/> BOM/Route  <input type="checkbox"/> Broken/Damage/Defect  <input type="checkbox"/> Incomplete/Unclear Instructions  <input type="checkbox"/> Drill Holes  <input type="checkbox"/> Fit/Function         </div> <div style="width: 50%;"> <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Folio/Program  <input type="checkbox"/> Grain Direction  <input type="checkbox"/> Weld  <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Out of Sequence  <input type="checkbox"/> Off-set/Set-up         </div> <div style="width: 50%;"> <input type="checkbox"/> Positioned Wrong  <input type="checkbox"/> Outside Tolerance  <input type="checkbox"/> Drawing  <input type="checkbox"/> Finish  <input type="checkbox"/> Part Lost/Missing  <input type="checkbox"/> Misread         </div> </div>			
Other/Details:					